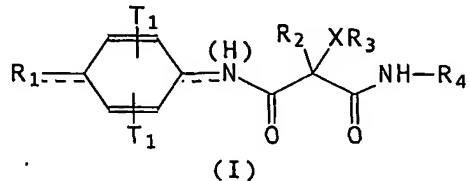


Claims:

1) An optionally substituted compound of the formula I or a salt thereof;

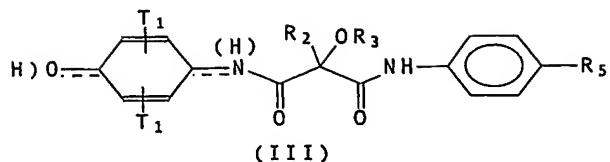


wherein R₁ is O or S when double bonded to the ring or is OH, SH, or a protected equivalent, when single bonded to the ring, R₂ is hydrogen or more preferably an C₁-C₁₀ organic group attached by a carbon atom, X is H, O, OO, S or SS R₃ is absent where X=H, is hydrogen or is a hydroxyl or thiol protecting group, R₄ is a hetero- or preferably homo-cyclic aryl group, optionally substituted with a further group R₅ and groups T₁ are each, independently, absent, hydrogen or an S-R₆ group, where any/each R₆ is independently an organic group of molecular weight up to around 500 amu.

2) A compound as claimed in claim 1 wherein R₂ is an optionally substituted alkyl, alkenyl, alkynyl, alkaryl, aralkyl, arylsulphonylalkyl or aralkenyl group, R₃ is hydrogen or a C₂-C₇, acyl, or alkaryl group, R₅ is an alkyl, alkenyl, alkynyl, OH, O-alkyl, thio, thioalkyl, halo, or primary, secondary, tertiary or quaternary amino group and R₆ is a substituted or unsubstituted alkyl, alkenyl, alkynyl, alkaryl, aralkyl, alkyl ester, alkyl amide, alkyl acid, polyol, sugar, oligo(alkylamide), oligo(alkylester), or oligopeptide group.

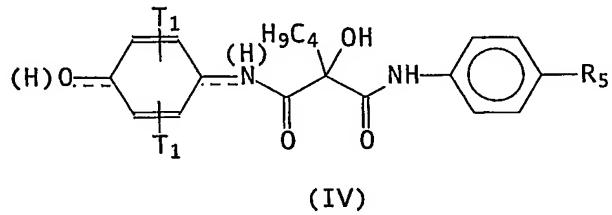
3) A compound as claimed in claim 1 or claim 2 of formula III;

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wherein T_1 , R_2 and R_3 are as described in claim 1 or claim 2 and R_5 is hydrogen or an alkyl, alkenyl group, OH, O-alkyl, O-acyl, SH, S-alkyl, S-acyl, halo, or amino group. Preferred R_5 groups are hydrogen, OH and O-acyl.

4) A compound as claimed in any of claims 1 to 3 of formula IV, or a salt thereof;



wherein R_5 is hydrogen or OH and each T_1 is, independently, H or a glutathione moiety attached via the sulphur atom thereof.

5) A compound as claimed in any of claims 1 to 4 wherein both T_1 groups are independently thiols, attached by the sulphur atom thereof.

6) A compound as claimed in claim 5 wherein both of said thiols are independently glutathione or cysteine.

7) A compound as claimed in any of claims 1 to 4 wherein both T_1 groups are hydrogen.

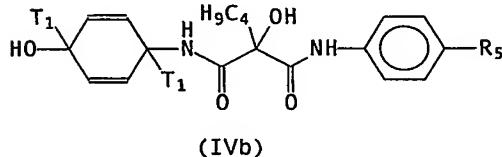
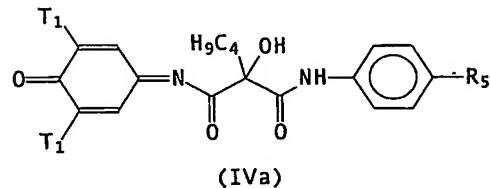
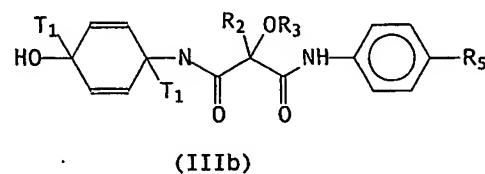
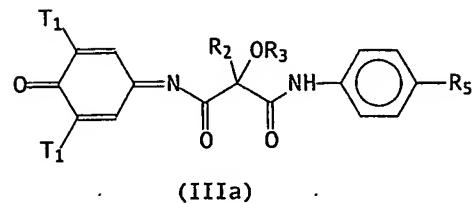
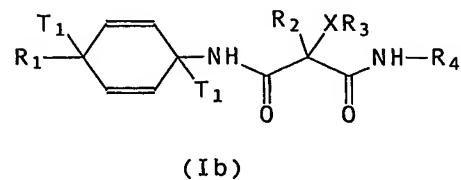
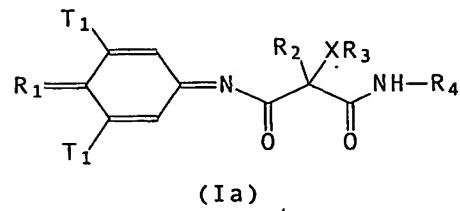
8) A compound of any of claims 1 to 7 wherein the two T_1 groups are independently ortho or meta to group R_1 .

9) A compound as claimed in any of claims 1 to 7

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wherein one T_1 group is ipso to group R_1 and one T_1 group is para to group R_1 .

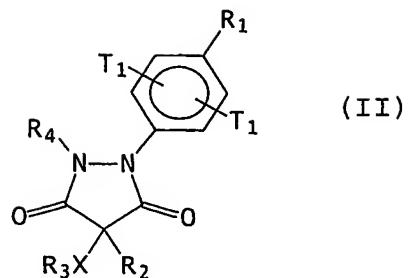
10) A compound as claimed in any of claims 1 to 7 having a formula Ia, Ib, IIIa, IIIb, IVa and/or IVb



wherein R_1 - R_5 , T_1 and X are as defined in any of claims 1 to 7

11) A method for the synthesis of a compound as defined in any of claims 1 to 10 by ring-opening of a starting material of formula II

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Wherein T_1 , R_1 , R_2 , R_3 , R_4 and X are as defined in any of claims 1 to 7, or protected derivatives or precursors thereof.

- 12) A method of claim 11 wherein the two T_1 groups are independently ortho or meta to group R_1 .
- 13) A method as claimed in claim 11 or claim 12 wherein a compound of formula II having hydrogens at both T_1 positions is subjected to ring-opening followed by reaction with a thiol to provide a compound as claimed in any of claims 1 to 6 or 8 to 10 wherein at least one T_1 group is a thiol.
- 14) A method of treatment of a mammalian subject comprising administering a compound as claimed in any of claims 1 to 10.
- 15) A method for the for treatment, prevention or control of a viral, autoimmune, neoplastic, inflammatory and/or allergic condition, said method comprising administration of a compound as claimed in any of claims 1 to 10.
- 16) A method of tonic treatment of an aging mammalian subject, or a subject suffering from the aftereffects of infection, disease or treatment, said method comprising administration of a compound as claimed in any of claims 1 to 10.

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- 17) A compound as claimed in any of claims 1 to 10 for use in therapy.
- 18) The use of a compound as claimed in any of claims 1 to 10 in the manufacture of a medicament for use in a method as claimed in any of claims 14 to 16.
- 19) A pharmaceutical composition comprising a compound as claimed in any of claims 1 to 10 and at least one pharmaceutically acceptable excipient, carrier or diluent.
- 20) A functional or fortified food comprising a compound as claimed in any of claims 1 to 10 formulated in an edible food or potable beverage product.